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ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

**BEFORE THE ARIZONA CORPORATION COMMISSION**

COMMISSIONERS

Arizona Corporation Commission

**DOCKETED**

JAN 30 2009

KRISTIN K. MAYES, CHAIRMAN

PAUL NEWMAN

GARY PIERCE

SANDRA D. KENNEDY

BOB STUMP

DOCKETED BY

IN THE MATTER OF SMART  
METERING REQUIREMENTS OF  
SECTION 1252 OF THE ENERGY  
POLICY ACT OF 2005

Docket No. E-00000A-06-0038

**APPLICATION OF TRICO ELECTRIC  
COOPERATIVE, INC. FOR APPROVAL OF ITS  
STANDARD OFFER GENERAL SERVICE TIME  
OF USE-EXPERIMENTAL TARIFF AND ITS  
INVESTIGATION AND IMPLEMENTATION OF  
ITS ADVANCED METERING INFRASTRUCTURE**

Trico Electric Cooperative, Inc. ("Trico"), an Arizona electric distribution public service corporation, in compliance with Arizona Corporation Commission ("Commission") Decision No. 69736 issued July 30, 2007 applies for Commission approval of its Standard Offer General Service Time of Use-Experimental Tariff attached hereto and to its investigation and implementation of its advance metering infrastructure.

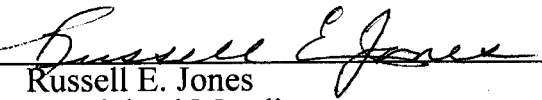
In support of the Application with respect to such Tariff is the Pre-Filed Direct Testimony of David W. Hedrick and in support of the Application pertaining to its advanced metering infrastructure is Pre-Filed Direct Testimony of Charles N. Emerson, which Testimony is filed herewith.

1 Trico waives any deadlines the Commission's Staff has in connection with this  
2 Application.

3 WHEREFORE, Trico prays that upon such proceeding hereon as determined by the  
4 Commission, this Application be approved by the Commission.

5 Respectfully submitted this 30<sup>th</sup> day of January, 2009.

6 WATERFALL ECONOMIDIS CALDWELL  
7 HANSHAW & VILLAMANA, P.C.

8 By   
9 Russell E. Jones  
10 D. Michael Mandig  
11 Attorneys for Trico Electric Cooperative, Inc.

12 **Original and 15 copies** filed this 30<sup>th</sup>  
13 day of January, 2009, to:

14 Docket Control  
15 Arizona Corporation Commission  
16 1200 West Washington  
17 Phoenix, Arizona 85007  
18  
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1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 **COMMISSIONERS:**

3 Kristin K. Mayes, Chairman  
4 Paul Newman  
5 Gary Pierce  
6 Sandra D. Kennedy  
7 Bob Stump

8 IN THE MATTER OF SMART METERING  
9 REQUIREMENTS OF SECTION 1252 OF  
10 THE ENERGY POLICY ACT OF 2005

Docket No. E-00000A-06-0038

**PRE-FILED DIRECT TESTIMONY OF  
CHARLES N. EMERSON ON BEHALF  
OF TRICO ELECTRIC  
COOPERATIVE, INC.**

11 **Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

12 A: My name is Charles N. Emerson. My business address is 8600 W. Tangerine Road,  
13 Marana, Arizona.

14  
15 **Q: BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

16 A: I am employed by Trico Electric Cooperative, Inc. and have been the Manager of Technical  
17 Services for the last 30 years.

18  
19 **Q: PLEASE GENERALLY DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS  
20 MANAGER OF TECHNICAL SERVICES.**

21 A: As department manager I am responsible for designing and building Trico's distribution,  
22 transmission and substation systems. I am also responsible for the operations and  
23 maintenance of substations, meters, and line equipment.

24  
25 **Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK  
26 EXPERIENCE WITH OTHERS THAN TRICO.**

1 A: I have a Bachelor Engineering degree. Prior to my employment with Trico, I worked for 7  
2 years as a consulting engineer for electric cooperatives in Arizona, New Mexico and Texas.  
3

4 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

5 A: The purpose of my testimony is to explain Trico's investigation of the feasibility and cost-  
6 effectiveness of Trico's implementing advanced metering infrastructure for its service  
7 territory and the implementation of such technology as required by the Commission's  
8 Decision No. 69736.  
9

10 **Q: WHAT ARE THE RESULTS OF SUCH INVESTIGATION AND WHAT IS THE**  
11 **EXTENT OF SUCH IMPLEMENTATION?**

12 A: Over 20 years ago Trico did its first pilot program in advanced metering. The goal was to  
13 freeze the number of meter readers at 7 and reduce this number to 3 when an acceptable  
14 technology was proven. In 1993 more the 6,000 offsite automated meters (OMR) were  
15 installed in hard to read locations. Trico had 15,729 services in place at the end of 1993.  
16 These meters sent a radio signal when pinged by a handheld device within 1,000 meters on  
17 the OMR. This OMR System was very cost effective with a 7 year payback for the hard to  
18 read locations. Even though the OMR System is still being utilized it is not considered a  
19 long term solution because this system still requires meter readers in the field.  
20  
21

22 In 1999 Hunt Technology's power line carrier Turtle System (TS1) was selected as a pilot  
23 program. In 2001 Trico decided to work towards a full implementation with the TS1  
24 System. Hunt Technology's system has improved over the years and Trico is now installing  
25  
26

1 Hunts TS2 System. To date Trico has 28,000 TS1 and TS2 Meters installed with 41,533  
2 services in place as of November 30, 2008.

3  
4 The TS2's work well for standard residential, but it was found that a smarter meter was  
5 needed for residential time-of-use and commercial time-based rates. Many Smart Meter  
6 Systems were investigated and in 2006 Trico chose SmartSynch Meters for residential  
7 time-of-use and commercial time-based rates. One big advantage to the SmartSynch Meters  
8 is that no capital investment AMR infrastructure is needed. This is because it uses existing  
9 public wireless networks to communicate between the meter and a Trico based server.  
10 Trico's cost for the service is based on the customer's needs. That is, the cost is  
11 proportional to the number of meters read, frequency of the reads and the volume of the  
12 data retrieved.  
13  
14

15  
16 To date Trico has approximately:

17 4 meter readers for more than 40,000 meters

18 28,000 TS1 and TS2 Meters installed

19 1,000 Commercial SmartSynch Meters installed

20 1,500 TOU SmartSynch Meters installed

21 9,000 to 10,000 meters left to automate  
22

23 Since Trico started using the SmartSynch Meters it has the metering technology needed to  
24 offer time-based rates to all of its customers.  
25  
26

1 Trico plans to continue investigating smart meter technologies to meet its customer's needs  
2 into the future.

3  
4 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

5  
6 **A:** Yes, it does.  
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**BEFORE THE ARIZONA CORPORATION COMMISSION**

**COMMISSIONERS:**

Kristin K. Mayes, Chairman  
Paul Newman  
Gary Pierce  
Sandra D. Kennedy  
Bob Stump

IN THE MATTER OF SMART  
METERING REQUIREMENTS OF  
SECTION 1252 OF THE ENERGY  
POLICY ACT OF 2005

Docket No. E-00000A-06-0038

**PRE-FILED DIRECT TESTIMONY OF DAVID W. HEDRICK  
ON BEHALF OF TRICO ELECTRIC COOPERATIVE, INC.**

**January 9, 2009**

1    **Q.    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2

3    A.    My name is David W. Hedrick and my business address is 5555 North Grand Boulevard,  
4           Oklahoma City, Oklahoma 73112-5507.

5

6    **Q.    BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

7

8    A.    I am employed by C. H. Guernsey & Company, Engineers, Architects and Consultants. I  
9           am Vice-President and Manager of the Analytical Services group.

10

11   **Q.    PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
12   **WORK EXPERIENCE.**

13

14   A.    I have earned a Bachelor of Science degree from the University of Central Oklahoma in  
15           mathematics and a M.B.A degree from Oklahoma City University. I have been employed  
16           with C. H. Guernsey since 1981. My primary area of responsibility is rate analysis and  
17           cost of service work for electric distribution cooperatives and electric  
18           generation/transmission cooperatives.

19

20   **Q.    HAVE YOU PREVIOUSLY TESTIFIED BEFORE REGULATORY**  
21   **COMMISSIONS?**

22

23   A.    Yes. I have testified before the Arizona Corporation Commission, the Arkansas Public  
24           Service Commission, the Colorado Corporation Commission, the Oklahoma Corporation  
25           Commission, the Public Utility Commission of Texas and the Wyoming Public Service  
26           Commission.



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**Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS MATTER?**

A. I am testifying on behalf of TRICO Electric Cooperative, Inc. ("TRICO" or the "Cooperative").

**Q. ARE YOU AUTHORIZED TO TESTIFY ON BEHALF OF TRICO?**

A. Yes, I am.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

A. My testimony will describe TRICO's proposed optional General Service Time of Use tariff.

**Q. WHAT ARE TRICO'S OBJECTIVES IN THIS FILING?**

- A. TRICO's objectives in this filing are:
- a. Meet the Commission's requirement that those customer classes of TRICO that do not have, or will not have upon conclusion of TRICO's pending rate case, a time of use rate option will have one, with the exception of those customer classes for which option is not applicable, such as lighting service, street lighting service, cogeneration 100 kW or greater and QF1 classes;
  - b. Provide a proper pricing signal to potential time of use customers;
  - c. Support efforts to increase conservation and maximize energy efficiency.

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**Q. HAS THE BOARD OF DIRECTORS OF TRICO APPROVED THIS RATE FILING BASED ON THESE OBJECTIVES?**

A. Yes. The TRICO Board of Directors approved the filing at its meeting on January 29, 2009.

**Q. WHAT EFFECT WOULD THIS NEW RATE AND TARIFF HAVE ON TRICO'S MARGINS, RETURN AND REVENUE?**

A. None. TRICO has no current customer under this tariff and, therefore, no billing units to apply the rate to. In addition, as an optional rate, no customer would be automatically moved to this rate if approved. Customer to be billed under this rate would request service under this rate, as is the case with other optional time of use rates.

**Q. DOES THIS RATE FILING MEET THE COMMISSION'S REQUEST THAT A TIME OF USE RATE OPTION BE AVAILABLE FOR ALL APPROPRIATE TRICO CUSTOMERS?**

A. Yes. This rate and tariff completes the process of offering a time of use rate, available to all appropriate customer classes. Residential Service customers will have access under the proposed rates to a Residential Time of Use rate option upon the conclusion of TRICO's pending rate case. Irrigation and Water Pumping customers have access under current and proposed rates to Time of Day Pumping Service or Interruptible Service for Irrigation and Water Pumping Service rate options and Commercial and Industrial have access to

1 Interruptible Service under existing and proposed rates. TRICO's existing General Service  
2 4 Rate option is, in fact, already a time of use rate. This filing is designed to add a General  
3 Service Time of Use rate option, open to existing customers for the General Service 1,  
4 General Service 2 and General Service 3 rate classes.  
5  
6

7 **Q. WAS THE ATTACHED TARIFF PREPARED BY YOU OR UNDER YOUR**  
8 **SUPERVISION?**  
9

10 A. Yes.  
11

12 **Q. PLEASE DESCRIBE THE PROPOSED GENERAL SERVICE TIME OF USE**  
13 **RATE.**  
14

15 A. The proposed rate includes four basic charges: a Customer Charge, a Billing Demand  
16 Charge, a Coincident Demand Charge and an Energy Charge.  
17

18 The Customer Charge proposed is \$4 per month higher than the standard General Service  
19 Customer Charge. The increased customer charge recovers the increased cost of metering  
20 and billing required by the more complex rate structure of the proposed General Service  
21 Time of Use rate. The \$4 per month differential is the same as the difference proposed in  
22 the Residential and Residential TOU rates in TRICO's rate filing before the commission.  
23

24 The Billing Demand Charge is a non-coincident demand (NCP) charge, designed to  
25 recover TRICO's cost of providing distribution wires service to the customer. This charge  
26

1 is based on the customer's maximum non-coincident demand during the month and  
2 therefore can not be avoided through managing load to avoid a coincident peak. The \$5.95  
3 per kW charge is the distribution component of the proposed GS 3 rate in TRICO's rate  
4 filing before the commission.

5  
6 The Coincident Demand Charge is set at \$29.50 per kW. This charge will be applied to the  
7 customer's monthly metered demand at the time of the AEPCO peak. This charge has  
8 been set at the same level as in the proposed IS 1 rate. The charge is higher than the  
9 AEPCO demand cost and is intended to send a clear signal to avoid the peak period.

10  
11 Customers requesting the General Service Time of Use rate will be provided by TRICO  
12 with historical information concerning AEPCO's monthly peak dates and times. The intent  
13 of the Cooperative is to provide participating customers with as much information as  
14 possible to permit them to avoid the AEPCO peak.

15  
16 **Q. DOES THE PROPOSED GENERAL SERVICE TOU RATE PROVIDE THE**  
17 **APPROPRIATE PRICE SIGNAL?**

18  
19 **A.** Yes. The proposed coincident peak kW charge of \$29.50 is a substantial pricing signal.  
20 Customers who can avoid the peak save that \$29.50 per kW. Attachment 1 provides a  
21 comparison of the proposed GS TOU rate with billing on the standard GS 3 rate at various  
22 levels of consumption. Depending on the member's load factor, the GS TOU rate will  
23 provide a benefit to the consumer if the peak demand is reduced by 30% - 50%.  
24 Significant benefit is attained as the peak demand is reduced below the 50% level.  
25 However, there is a significant penalty if the member's coincident peak demand is not  
26

1 significantly lower than the member's non-coincident peak. The rate is designed to  
2 encourage the proper consumption with respect to the on peak period.

3  
4 **Q. DOES THE PROPOSED GENERAL SERVICE TOU RATE ADEQUATELY**  
5 **RECOVER THE COSTS OF PROVIDING SERVICE?**

6  
7 A. Yes. The rate is designed in relation to the standard General Service rate schedules. The  
8 customer charge, billing demand charge and energy charge all reflect the distribution  
9 component of the proposed general service rates. The purchased power demand  
10 component has been removed from the Billing Demand Charge and Energy Charge and  
11 included entirely in the Coincident Demand Charge. The GS TOU rate will recover  
12 TRICO's distribution wires costs in the same manner as the GS 3 rate. All purchased  
13 power demand costs will be recovered through the Coincident Demand Charge.

14  
15 **Q. HOW WOULD TRICO MEMBERS TAKING ADVANTAGE OF THE GS TOU**  
16 **RATE KNOW WHEN THE AEPCO PEAK PERIODS ARE LIKELY TO OCCUR?**

17  
18 A. TRICO will provide members who desire to take advantage of the GS TOU rate with  
19 historical information so they can make appropriate decisions about AEPCO peak time  
20 periods. This information will be provided to members using two methods: 1) by placing  
21 the information on the cooperative's web site, and 2) by providing it to any member  
22 requesting it and all members desiring to participate in the GS TOU rate. Reproduced  
23 below is a sample of the type of information to be provided. The information will be  
24 updated over time with current information as it becomes available. Attached as  
25 Attachment 2 is an example of the information that will be provided to GS TOU  
26 customers on the cooperative web site and as a handout.

1  
2       **Definition of AEPCO Historical Peak Dates and Times**

3               **April 1 through November 14:** AEPCO peak hours have historically  
4 occurred between 1 PM to 7 PM, any day, including weekends and  
5 holidays. All other hours have historically been Off-Peak.  
6

7               **November 15 through March 31:** AEPCO peak hours have historically  
8 occurred between 6:30 AM to 8:30 AM and between 5 PM to 9 PM, any  
9 day, including weekends and holidays. All other hours have historically  
10 been Off-Peak.  
11

12       **Actual Historical Information for 2007**

13       *(A one year example is provided here. GS TOU customers will be provided with a*  
14 *minimum of three years of history, including the most recently available*  
15 *information.)*

16	January	AEPCO peak: Monday	January 15	7:00 PM
17	February	AEPCO peak: Friday	February 2	8:00 AM
18	March	AEPCO peak: Saturday	March 17	5:00 PM
19	April	AEPCO peak: Monday	April 30	5:00 PM
20	May	AEPCO peak: Thursday	May 31	5:00 PM
21	June	AEPCO peak: Saturday	June 30	5:00 PM
22	July	AEPCO peak: Thursday	July 5	4:00 PM
23	August	AEPCO peak: Monday	August 13	4:00 PM
24	September	AEPCO peak: Saturday	September 1	3:00 PM
25	October	AEPCO peak: Thursday	October 4	2:00 PM
26	November	AEPCO peak: Monday	November 5	4:00 PM

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December AEPCO peak: Thursday December 27 7:00 PM

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

**A. Yes, it does.**

**ELECTRIC RATES****TRICO ELECTRIC COOPERATIVE, INC.****8600 W. Tangerine Road****Marana, Arizona 85653****Filed By: Charlie Emerson****Title: Interim General Manager/CEO**

Effective Date: \_\_\_\_\_

**STANDARD OFFER TARIFF****GENERAL SERVICE TIME OF USE - EXPERIMENTAL  
SCHEDULE GS-TOU****Availability**

In the Cooperative's Certificated Area where its facilities are of adequate capacity and the required phase and suitable voltage are in existence and are adjacent to the premises served. Limited to the first 100 qualified customers.

**Application**

The General Service Time of Use Rate – Experimental (GS-TOU) is applicable for single and three phase service for any customer who would otherwise be eligible for either the General Service 1 (GS1), General Service 2 (GS2) or General Service 3 (GS3) rate. All service shall be delivered at a single service location. The Cooperative shall have the right to meter in the most practical manner, either primary or secondary voltage.

**Type of Service**

The type of service available under this schedule will be determined by the Cooperative and will normally be:

120/240 volt single phase, 120/208 volt three phase or 277/480 volt three phase

**Monthly Rate**

STANDARD RATE	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Customer Charge (\$/Customer/Mo)							
Single-Phase		\$9.35	\$1.62	\$6.21	\$6.82	\$24.00	\$24.00
Three-Phase		\$9.35	\$1.62	\$6.21	\$14.82	\$32.00	\$32.00
Billing Demand (\$/kW/Month)	\$0.00				\$5.95	\$5.95	\$5.95
Coincident Demand Charge* (\$/kW/Month)	\$29.50				\$0.00	\$0.00	\$29.50
Energy Charge (\$/kWh)	\$0.03749				\$0.02626	\$0.02626	\$0.06375

\* The Coincident Demand Charge is applied to the customer's monthly metered demand as recorded by suitable metering device at the time of the Arizona Electric Power Cooperative, Inc. (AEPCO) peak.



**STANDARD OFFER TARIFF****GENERAL SERVICE TIME OF USE - EXPERIMENTAL  
SCHEDULE GS-TOU**

---

**Minimum Monthly Charge**

The greater of the following:

1. The Customer Charge;
2. \$1.00 per kVA of required transformer capacity;
3. The amount specified in the written contract between the Cooperative and the customer.

**Power Factor**

The customer shall maintain power factor of not less than ninety percent (90%) but not greater than unity. The Cooperative shall have the right to measure such power factor at any time. Should such measurement establish that the power factor of the customer is less than ninety percent (90%) or greater than unity, the customer shall upon 60 days written notice correct such power factor to ninety percent (90%) to unity. If not timely corrected, the Cooperative shall have the right to increase the kWh for billing purposes by one percent (1%) for each one percent (1%) of power factor below ninety percent (90%) or above unity.

**Billing Demand**

The billing demand shall be the maximum kilowatt demand established by the customer for any period of fifteen (15) consecutive minutes during the month for which the bill is rendered, as indicated or recorded by a suitable metering device, but not less than the highest billing demand in the previous eleven months.

**Coincident Demand**

The Coincident Demand is the customer's monthly metered demand as recorded by suitable metering device at the time of the AEPCO peak.

**Primary Discount**

The Cooperative reserves the right to refuse delivery of power at primary voltage to the customer. With the Cooperative's consent, however, delivery of power at primary voltage will be billed with a three percent (3%) discount given on all demand and energy charges.

**Other Provisions**

The customer will be provided by the Cooperative with information concerning historical AEPCO monthly peak dates and times.

**Tax Adjustment**

To the charge computed in this rate schedule, including all adjustments, shall be added the applicable proportionate part of any taxes or governmental impositions which are or may in the future be assessed on the basis of gross revenues of the Cooperative and/or the price or revenue from the electric energy or service sold and/or the volume of energy purchased for sale and/or sold hereunder.

**STANDARD OFFER TARIFF****GENERAL SERVICE TIME OF USE - EXPERIMENTAL  
SCHEDULE GS-TOU**

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**Wholesale Power Cost Adjustment**

The Cooperative shall, if purchased power cost is increased or decreased above or below the base purchased power cost of \$0.081225 per kWh sold, flow through such increases or decreases to all classes of customers.

In addition to the foregoing, all kWh sold to each customer under this rate schedule shall be subject to an additional temporary wholesale power cost adjustment, if any, that may be charged the Cooperative by its supplier of electricity which consists of an additional surcharge, a temporary credit and/or a fuel bank surcharge.

**Rules and Regulations**

The Rules and Regulations and Line Extension Policies of the Cooperative as on file with the Arizona Corporation Commission shall apply to this rate schedule.

Upon application for service or upon request, the Cooperative will assist the customer in selecting the rate schedule best suited to his requirements, but the Cooperative does not guarantee the customer will be served under the most favorable rate schedule. Upon written notification of any material changes in the customer's installation, load conditions or use of service, the Cooperative will assist in determining if a change in rates is desirable. No more than one (1) such change at the customer's request will be made within any twelve (12) month period.

**Contract**

If service is requested in the Cooperative's Certificated Area and the provisions outlined in the Availability Clause of this rate tariff cannot be met, it will be necessary for the Cooperative and customer to mutually agree, in a written contract, on the conditions under which service will be made available.

**Service Availability Charge**

A Service Availability Charge to be paid by the customer to the Cooperative may be included in the contract to reimburse the Cooperative for its operating expenses with regard to idle or standby services in connection with the facilities constructed or installed pursuant to the contract based upon the Cooperative's estimate of its actual operating costs for such idle or standby services.

**Environmental Portfolio Standard (EPS) Charge**

The Cooperative shall add to its bill an EPS charge in accordance with the approved EPS tariff to help offset the costs associated with TRICO programs designed to promote alternative generation requirements that satisfy the Environmental Portfolio Standard as approved by the Arizona Corporation Commission. Other charges may be applicable subject to approval by the Arizona Corporation Commission.

**Demand Side Management (DSM) Programs; DSM Adjustment Mechanism**

The Cooperative shall recover its cost for pre-approved DSM programs through a separate DSM adjustment mechanism which shall provide for a separate and specific accounting for pre-approved DSM cost.

TRICO ELECTRIC COOPERATIVE, INC.

COMPARISON OF PROPOSED GS 3 RATE  
AND PROPOSED GS TOU RATE

NCP kW	On Peak kW	Load Factor	kWh	Proposed GS3 Billing	Proposed GS TOU Rate	Difference	% Difference
Customer Charge - Three Phase							
Billing Demand Charge				28.00	32.00		
Coincident Demand Charge				16.65	5.95		
Energy Charge				0.081000	0.06375		
WPCA				0.000000	0.000000		
DSMA				0.000191	0.000191		
<b>0% On Peak Contribution</b>							
10	0	20.00%	1,460	313.04	184.85	(128.19)	-40.95%
10	0	40.00%	2,920	431.58	278.21	(153.37)	-35.54%
10	0	60.00%	4,380	550.12	371.56	(178.56)	-32.46%
10	0	80.00%	5,840	668.66	464.92	(203.74)	-30.47%
75	0	20.00%	10,950	2,165.79	1,178.40	(987.39)	-45.59%
75	0	40.00%	21,900	3,054.83	1,878.56	(1,176.28)	-38.51%
75	0	60.00%	32,850	3,943.87	2,578.71	(1,365.16)	-34.61%
75	0	80.00%	43,800	4,832.92	3,278.87	(1,554.05)	-32.16%
100	0	20.00%	14,600	2,878.39	1,560.54	(1,317.85)	-45.78%
100	0	40.00%	29,200	4,063.78	2,494.08	(1,569.70)	-38.63%
100	0	60.00%	43,800	5,249.17	3,427.62	(1,821.55)	-34.70%
100	0	80.00%	58,400	6,434.55	4,361.15	(2,073.40)	-32.22%
<b>30% On Peak Contribution</b>							
10	3	20.00%	1,460	313.04	273.35	(39.69)	-12.68%
10	3	40.00%	2,920	431.58	366.71	(64.87)	-15.03%
10	3	60.00%	4,380	550.12	460.06	(90.05)	-16.37%
10	3	80.00%	5,840	668.66	553.42	(115.24)	-17.23%
75	23	20.00%	10,950	2,165.79	1,842.15	(323.64)	-14.94%
75	23	40.00%	21,900	3,054.83	2,542.31	(512.53)	-16.78%
75	23	60.00%	32,850	3,943.87	3,242.46	(701.41)	-17.78%
75	23	80.00%	43,800	4,832.92	3,942.62	(890.30)	-18.42%
100	30	20.00%	14,600	2,878.39	2,445.54	(432.85)	-15.04%
100	30	40.00%	29,200	4,063.78	3,379.08	(684.70)	-16.85%
100	30	60.00%	43,800	5,249.17	4,312.62	(936.55)	-17.84%
100	30	80.00%	58,400	6,434.55	5,246.15	(1,188.40)	-18.47%

TRICO ELECTRIC COOPERATIVE, INC.

COMPARISON OF PROPOSED GS 3 RATE  
AND PROPOSED GS TOU RATE

NCP kW	On Peak kW	Load Factor	kWh	Proposed GS3 Billing	Proposed GS TOU Rate	Difference	% Difference
Customer Charge - Three Phase							
				28.00	32.00		
Billing Demand Charge				16.65	5.95		
Coincident Demand Charge					29.50		
Energy Charge				0.081000	0.06375		
WPCA				0.000000	0.000000		
DSMA				0.000191	0.000191		
<b>50% On Peak Contribution</b>							
10	5	20.00%	1,460	313.04	332.35	19.32	6.17%
10	5	40.00%	2,920	431.58	425.71	(5.87)	-1.36%
10	5	60.00%	4,380	550.12	519.06	(31.05)	-5.65%
10	5	80.00%	5,840	668.66	612.42	(56.24)	-8.41%
75	38	20.00%	10,950	2,165.79	2,284.65	118.86	5.49%
75	38	40.00%	21,900	3,054.83	2,984.81	(70.03)	-2.29%
75	38	60.00%	32,850	3,943.87	3,684.96	(258.91)	-6.56%
75	38	80.00%	43,800	4,832.92	4,385.12	(447.80)	-9.27%
100	50	20.00%	14,600	2,878.39	3,035.54	157.15	5.46%
100	50	40.00%	29,200	4,063.78	3,969.08	(94.70)	-2.33%
100	50	60.00%	43,800	5,249.17	4,902.62	(346.55)	-6.60%
100	50	80.00%	58,400	6,434.55	5,836.15	(598.40)	-9.30%
<b>70% On Peak Contribution</b>							
10	7	20.00%	1,460	313.04	391.35	78.32	25.02%
10	7	40.00%	2,920	431.58	484.71	53.13	12.31%
10	7	60.00%	4,380	550.12	578.06	27.95	5.08%
10	7	80.00%	5,840	668.66	671.42	2.76	0.41%
75	53	20.00%	10,950	2,165.79	2,727.15	561.36	25.92%
75	53	40.00%	21,900	3,054.83	3,427.31	372.48	12.19%
75	53	60.00%	32,850	3,943.87	4,127.46	183.59	4.66%
75	53	80.00%	43,800	4,832.92	4,827.62	(5.30)	-0.11%
100	70	20.00%	14,600	2,878.39	3,625.54	747.15	25.96%
100	70	40.00%	29,200	4,063.78	4,559.08	495.30	12.19%
100	70	60.00%	43,800	5,249.17	5,492.62	243.45	4.64%
100	70	80.00%	58,400	6,434.55	6,426.15	(8.40)	-0.13%

TRICO ELECTRIC COOPERATIVE, INC.

COMPARISON OF PROPOSED GS 3 RATE  
AND PROPOSED GS TOU RATE

NCP kW	On Peak kW	Load Factor	kWh	Proposed GS3 Billing	Proposed GS TOU Rate	Difference	% Difference
<b>90% On Peak Contribution</b>							
Customer Charge - Three Phase				28.00	32.00		
Billing Demand Charge				16.65	5.95		
Coincident Demand Charge					29.50		
Energy Charge				0.081000	0.06375		
WPCA				0.000000	0.000000		
DSMA				0.000191	0.000191		
10	9	20.00%	1,460	313.04	450.35	137.32	43.87%
10	9	40.00%	2,920	431.58	543.71	112.13	25.98%
10	9	60.00%	4,380	550.12	637.06	86.95	15.80%
10	9	80.00%	5,840	668.66	730.42	61.76	9.24%
75	68	20.00%	10,950	2,165.79	3,169.65	1,003.86	46.35%
75	68	40.00%	21,900	3,054.83	3,869.81	814.98	26.68%
75	68	60.00%	32,850	3,943.87	4,569.96	626.09	15.87%
75	68	80.00%	43,800	4,832.92	5,270.12	437.20	9.05%
100	90	20.00%	14,600	2,878.39	4,215.54	1,337.15	46.45%
100	90	40.00%	29,200	4,063.78	5,149.08	1,085.30	26.71%
100	90	60.00%	43,800	5,249.17	6,082.62	833.45	15.88%
100	90	80.00%	58,400	6,434.55	7,016.15	581.60	9.04%
<b>100% On Peak Contribution</b>							
10	10	20.00%	1,460	313.04	479.85	166.82	53.29%
10	10	40.00%	2,920	431.58	573.21	141.63	32.82%
10	10	60.00%	4,380	550.12	666.56	116.45	21.17%
10	10	80.00%	5,840	668.66	759.92	91.26	13.65%
75	75	20.00%	10,950	2,165.79	3,390.90	1,225.11	56.57%
75	75	40.00%	21,900	3,054.83	4,091.06	1,036.23	33.92%
75	75	60.00%	32,850	3,943.87	4,791.21	847.34	21.48%
75	75	80.00%	43,800	4,832.92	5,491.37	658.45	13.62%
100	100	20.00%	14,600	2,878.39	4,510.54	1,632.15	56.70%
100	100	40.00%	29,200	4,063.78	5,444.08	1,380.30	33.97%
100	100	60.00%	43,800	5,249.17	6,377.62	1,128.45	21.50%
100	100	80.00%	58,400	6,434.55	7,311.15	876.60	13.62%

## TRICO ELECTRIC COOPERATIVE, INC.

## AEPCO PEAK DATES AND TIMES - HISTORICAL INFORMATION

**DEFINITION OF AEPCO HISTORICAL PEAK DATES AND TIMES**  
(General Guide - Peak may occur at other times)**April 1 through November 14:**

AEPCO peak hours have historically occurred between 1:00 PM to 7:00 PM, any day, including weekends and holidays. All other hours have historically been Off-Peak.

**November 15 through March 31:**

AEPCO peak hours have historically occurred between 6:30 AM to 8:30 AM and between 5:00 PM to 9:00 PM, any day, including holidays. All other hours have historically been Off-Peak.

**ACTUAL HISTORICAL AEPCO PEAKS**

	<u>Day</u>	<u>Time</u>	<u>Weekday</u>
<b><u>Actual 2006 AEPCO Peak Times</u></b>			
January	17	8:00 AM	Tuesday
February	21	8:00 AM	Tuesday
March	19	8:00 PM	Sunday
April	30	5:00 PM	Sunday
May	25	5:00 PM	Thursday
June	25	3:00 PM	Sunday
July	24	5:00 PM	Monday
August	8	4:00 PM	Tuesday
September	1	2:00 PM	Friday
October	3	4:00 PM	Tuesday
November	29	7:00 PM	Wednesday
December	19	7:00 PM	Tuesday
<b><u>Actual 2007 AEPCO Peak Times</u></b>			
January	15	7:00 PM	Monday
February	2	8:00 AM	Friday
March	17	5:00 PM	Saturday
April	30	5:00 PM	Monday
May	31	5:00 PM	Thursday
June	30	5:00 PM	Saturday
July	5	4:00 PM	Thursday
August	13	4:00 PM	Monday
September	1	3:00 PM	Saturday
October	4	2:00 PM	Thursday
November	5	4:00 PM	Monday
December	27	7:00 PM	Thursday
<b><u>Actual 2008 AEPCO Peak Times</u></b>			
January	18	8:00 AM	Friday
February	6	8:00 AM	Wednesday
March	26	8:00 PM	Wednesday
April	29	6:00 PM	Tuesday
May	20	4:00 PM	Tuesday
June	21	3:00 PM	Saturday
July	3	4:00 PM	Thursday
August	1	5:00 PM	Friday
September	6	4:00 PM	Saturday
October	1	5:00 PM	Wednesday
November	1	4:00 PM	Saturday
December	27	7:00 PM	Saturday

	<u>Day</u>	<u>Time</u>	<u>Weekday</u>
<b><u>Actual 2006 AEPCO Peak Times</u></b>			
January	17	8:00 AM	Tuesday
February	21	8:00 AM	Tuesday
March	19	8:00 PM	Sunday
April	30	5:00 PM	Sunday
May	25	5:00 PM	Thursday
June	25	3:00 PM	Sunday
July	24	5:00 PM	Monday
August	8	4:00 PM	Tuesday
September	1	2:00 PM	Friday
October	3	4:00 PM	Tuesday
November	29	7:00 PM	Wednesday
December	19	7:00 PM	Tuesday
<b><u>Actual 2007 AEPCO Peak Times</u></b>			
January	15	7:00 PM	Monday
February	2	8:00 AM	Friday
March	17	5:00 PM	Saturday
April	30	5:00 PM	Monday
May	31	5:00 PM	Thursday
June	30	5:00 PM	Saturday
July	5	4:00 PM	Thursday
August	13	4:00 PM	Monday
September	1	3:00 PM	Saturday
October	4	2:00 PM	Thursday
November	5	4:00 PM	Monday
December	27	7:00 PM	Thursday
<b><u>Actual 2008 AEPCO Peak Times</u></b>			
January	18	8:00 AM	Friday
February	6	8:00 AM	Wednesday
March	26	8:00 PM	Wednesday
April	29	6:00 PM	Tuesday
May	20	4:00 PM	Tuesday
June	21	3:00 PM	Saturday
July	3	4:00 PM	Thursday
August	1	5:00 PM	Friday
September	6	4:00 PM	Saturday
October	1	5:00 PM	Wednesday
November	1	4:00 PM	Saturday
December	27	7:00 PM	Saturday

	<u>Day</u>	<u>Time</u>	<u>Weekday</u>
<b><u>Actual 2007 AEPCO Peak Times</u></b>			
January	15	7:00 PM	Monday
February	2	8:00 AM	Friday
March	17	5:00 PM	Saturday
April	30	5:00 PM	Monday
May	31	5:00 PM	Thursday
June	30	5:00 PM	Saturday
July	5	4:00 PM	Thursday
August	13	4:00 PM	Monday
September	1	3:00 PM	Saturday
October	4	2:00 PM	Thursday
November	5	4:00 PM	Monday
December	27	7:00 PM	Thursday
<b><u>Actual 2008 AEPCO Peak Times</u></b>			
January	18	8:00 AM	Friday
February	6	8:00 AM	Wednesday
March	26	8:00 PM	Wednesday
April	29	6:00 PM	Tuesday
May	20	4:00 PM	Tuesday
June	21	3:00 PM	Saturday
July	3	4:00 PM	Thursday
August	1	5:00 PM	Friday
September	6	4:00 PM	Saturday
October	1	5:00 PM	Wednesday
November	1	4:00 PM	Saturday
December	27	7:00 PM	Saturday

	<u>Day</u>	<u>Time</u>	<u>Weekday</u>
<b><u>Actual 2008 AEPCO Peak Times</u></b>			
January	18	8:00 AM	Friday
February	6	8:00 AM	Wednesday
March	26	8:00 PM	Wednesday
April	29	6:00 PM	Tuesday
May	20	4:00 PM	Tuesday
June	21	3:00 PM	Saturday
July	3	4:00 PM	Thursday
August	1	5:00 PM	Friday
September	6	4:00 PM	Saturday
October	1	5:00 PM	Wednesday
November	1	4:00 PM	Saturday
December	27	7:00 PM	Saturday